

**MICROARRAYS AND USES THEREFOR**Abstract of the Invention

Methods of using microarrays to simplify analysis and characterization of genes and their function are provided. Such methods can be used to identify and characterize antibodies having binding affinity for a specific target antigen. A method of determining gene expression at the protein level by contacting an array of characterized or uncharacterized antibodies on a solid surface with one or more proteins and identifying the antibodies to which said protein(s) binds also is provided. This method can be used to compare the protein expression in two different populations of cells, such as normal cells and cancer cells or resting cells and stimulated cells. In addition, a method of determining gene expression at the protein level by contacting a microarray of nucleic acid samples derived from a variety of different sources with one or more nucleic acid probes then identifying the sample or samples to which the probe binds is provided.

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